Log No. **204 T Rev 6/4/21**

STATE BUILDING CODE COUNCIL

Washington State Energy Code Development
Standard Energy Code Proposal Form

Code being amended: ☒ Commercial Provisions ☐ Residential Provisions

Code Section # _C405.5.1_____

Brief Description:

Description: Reduction of redundancy in exterior lighting efficacy / controls requirement.

Proposed code change text: (Copy the existing text from the Integrated Draft, linked above, and then use <u>underline</u> for new text and ~~strikeout~~ for text to be deleted.)

C405.5.1 Exterior building grounds lighting. All exterior building grounds luminaires that operate at greater than <u>25</u> ~~50~~ watts shall have a minimum efficacy of 100 lumens per watt unless the luminaire is controlled by a motion sensor or qualifies for one of the exceptions under Section C405.5.2.
Exceptions:
1. Solar-powered ~~lamps~~ <u>luminaires</u> not connected to any electrical service.
~~2. Luminaires controlled by a motion sensor.~~
~~3~~<u>1</u>. Luminaires that qualify for one of the exceptions under Section C405.5.2.

Purpose of code change:

- With LED sources being dominant, the wattage requirement here could be reduced from 50 W to 25 W.
- #2 is applies to luminaires controlled by a motion sensor. In the text above, it already says "unless the luminaire is controlled by a motion sensor or…" #2 is redundant with this text
- #1 if solar powered and not connected to electrical service, does the energy code apply to this type of fixture? Isn't this an extraneous requirement?

Your amendment must meet one of the following criteria. Select at least one:

☐ Addresses a critical life/safety need.

☒ The amendment clarifies the intent or application of the code.

☐ Addresses a specific state policy or statute.
 (Note that energy conservation is a state policy)

☐ Consistency with state or federal regulations.

☐ Addresses a unique character of the state.

☐ Corrects errors and omissions.

Check the building types that would be impacted by your code change:

☐ Single family/duplex/townhome ☒ Multi-family 1 – 3 stories ☒ Multi-family 4 + stories

☒ Commercial / Retail   ☒ Institutional   ☒ Industrial

Your name   Michael Myer   Email address   Michael.myer@pnnl.gov

Your organization   Pacific NW Ntl Laboratory   Phone number   509-375-7292

Other contact name Mike Rosenberg

Instructions: Send this form as an email attachment, along with any other documentation available, to: sbcc@des.wa.gov. For further information, call the State Building Code Council at 360-407-9278.

Economic Impact Data Sheet

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants and businesses.

Removing exception #2 does not have an economic effect, #2 is redundant with the text in the preceding paragraph.

Removing exception #1 relates to the scope of coverage. If the product is not connected to electrical service, it is probably not subject to the energy code. This change does not have an economic effect.

LED fixtures are the dominant light source, and the efficacy is better than other sources and the wattage of many LED fixtures in exterior applications is below 50 W. Reducing from 50 W to 25 W is staying consistent with the original intent of the requirement.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost **Analysis tool** and **Instructions;** use these **Inputs. Webinars on the tool can be found Here and Here**)

$Click here to enter text./square foot (For residential projects, also provide $Click here to enter text./ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Provide your best estimate of the annual energy savings (or additional energy use) for your code change proposal?

0.109 kWh/ square foot (or) Click here to enter text.KBTU/ square foot

(For residential projects, also provide Click here to enter text.KWH/KBTU / dwelling unit)

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

Assumes 4,380 hours of operation as the lower wattage fixture is not required to be connected to an occupancy sensor. 25 W x 4,380 hours and assumed to light 1,000 square feet of space.

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:

No change in enforcement, just a shift in wattage to reflect the change in technologies.

All questions must be answered to be considered complete. Incomplete proposals will not be accepted.